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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,993	07/12/2000	Fred Boyle McCormick	55085USA1A.002	3298
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3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER QUARTERMAN, KEVIN J				
ART UNIT		PAPER NUMBER		
2879				

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/614,993	<b>Applicant(s)</b> MCCORMICK ET AL.	
	<b>Examiner</b> Kevin Quarterman	<b>Art Unit</b> 2879	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 38-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 54-66 is/are allowed.
- 6) ☒ Claim(s) 38-41, 43, 44 and 46-53 is/are rejected.
- 7) ☒ Claim(s) 42 and 45 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendments filed 03 March 2004 and 11 March 2004 have been entered.

### ***Drawings***

2. The replacement drawing was received on 03 March 2004. This drawing is acceptable.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 40-41, 43, 46-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (US 5804917).
5. Regarding independent claim 43, Figure 2 of Takahashi shows an article comprising an organic electronic device which comprises a substrate (3); an adhesive (5); a multi-layer structure comprising one or more organic layers (6) between an anode (4) and a cathode (7), the anode, cathode or an organic layer having at least one outer edge; and a sealing layer (1), wherein the adhesive seals an outer edge of an organic layer and has an opening (not labeled) through the adhesive that surrounds the multi-layer structure.

6. Regarding claim 40, Figure 2 of Takahashi shows a gap (not labeled) between the multi-layer structure and the surrounding adhesive.
7. Regarding claim 41, Takahashi discloses that the article is an organic electroluminescent device (Abstract).
8. Regarding claim 46, Figure 2 of Takahashi shows the adhesive sealing an outer edge of the anode or cathode.
9. Regarding claim 47, Figure 2 of Takahashi shows the adhesive sealing all outer edges of the organic layer.
10. Regarding claim 48, Figure 2 of Takahashi shows the adhesive sealing all outer edges of the multi-layer structure.
11. Regarding claim 49, the functional characteristics of the adhesive have not been given patentable weight. Apparatus claims covers what a device is, not what a device does (MPEP § 2114[R-1]).
12. Regarding claim 50, Figure 2 of Takahashi shows the adhesive and the multi-layer structure having approximately equal thicknesses.
13. Regarding claim 51, Figure 1 of Takahashi shows the adhesive thickness being greater than the multi-layer structure thickness.
14. Regarding claim 52, Figure 2 of Takahashi shows the adhesive on the substrate and the sealing layer on the adhesive.
15. Regarding claim 53, Figure 2 of Takahashi shows the multi-layer structure being encapsulated by the adhesive and being sandwiched between the substrate and sealing layer.

***Claim Rejections - 35 USC § 103***

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

18. Claims 38-39, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US 5804917) in view of Ito (US 5652067).

19. Regarding claim 38, Takahashi discloses the limitations of claim 43, as discussed earlier, but fails to exemplify the adhesive comprising a hot melt adhesive, pressure sensitive adhesive, curable adhesive, or filled adhesive.

20. Ito teaches that it is known in the art to provide an organic electroluminescent device with an adhesive layer comprising one of the above mentioned adhesives for preventing moisture from percolating the device.

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21. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Takahashi with an adhesive comprising a hot melt adhesive, pressure sensitive adhesive, curable adhesive, or filled adhesive, as taught by Ito, for sealing the device, thereby enhancing its structural integrity.

22. Regarding claim 39, Ito discloses that the filled adhesive is selected from the group comprising electrically conductive adhesives, thermally conductive adhesives, and desiccating adhesives (col. 19, ln. 56-61).

23. Regarding claim 44, Figure 4 of Ito shows the device having the organic layers comprising a hole-transporting layer (3), a light-emitting layer (4), and an electron-transporting layer (12).

***Allowable Subject Matter***

24. Claims 42 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

25. Claims 54-66 are allowed.

26. The following are statements of reasons for the indication of allowable subject matter:

27. Regarding claim 42, the prior art of record neither shows or suggests an article comprising, in addition to other limitations of the claim, a substrate comprising glass, the anode comprising ITO, the hole transporting layer comprising 4,4'-bis(naphthalene-2-yl)-N,N'-diphenyl benzidine, the light emitting layer comprising coumarin-doped tris(8-

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hydroxyquinolinato)aluminum, the electron transporting layer comprising bis(10-hydroxy-benzo(h)quinolinato) beryllium, bis(2-(2-hydroxy-phenyl)-benzothiazolato) zinc, 3,4,5-triphenyl-1,2,4-triazole, or 2-(4-biphenyl)-5-(4-t-butylphenyl)-1,3,4-oxadiazole, and the cathode comprising lithium fluoride and aluminum.

28. Regarding claim 45, the prior art of record neither shows or suggests an article comprising, in addition to other limitations of the claim, a desiccant in the gap.

29. Regarding independent claim 54, the prior art of record neither shows or suggests an organic electronic device comprising, in addition to other limitations of the claim, an adhesive and release liner having a combined thickness greater than the multi-layer structure thickness, wherein the adhesive has an opening through it that surrounds the multi-layer structure. Due to their dependency upon independent claim 54, claims 55-60 are also allowable.

30. Regarding independent claim 61, the prior art of record neither shows or suggests an organic electronic device precursor comprising, in addition to other limitations of the claim, an adhesive and release liner having a combined thickness greater than the multi-layer thickness, wherein the adhesive has an opening through it that surrounds the multi-layer structure. Due to their dependency upon independent claim 61, claims 62-66 are also allowable.

### ***Response to Arguments***

31. Applicant's arguments have been considered but are moot in view of the new grounds of rejection.

**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman  
Examiner  
Art Unit 2879

kq   
21 July 2004

  
**Joseph Williams**  
**Primary Examiner**  
**Art Unit 2879**